

ABSTRACT OF THE DISCLOSURE

A synchronization system in accordance with the principles of the invention includes a central synchronizing management unit, at least one synchronization distribution unit, and at least one network element. Each synchronization distribution unit receives synchronization and management information from the central synchronization management unit. This information may be transmitted directly from the central synchronization management unit, or it may be transmitted through another synchronization distribution unit in a group of a daisy-chained synchronization distribution units. The daisy-chained arrangement employs both active and passive optical paths. The central synchronizing management unit may query any synchronization distribution unit within the system to obtain performance statistics. Additionally, the central synchronizing management unit may detect faults within the system by setting performance monitoring thresholds and interrogating a synchronization distribution unit to determine whether a threshold has been exceeded. The synchronization distribution units are physically located in close proximity to the network elements they serve. Additionally, the management and synchronization information exchanged between the central synchronization unit and a synchronization distribution unit is carried over a bidirectional optical link.